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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,963	12/17/2001	Addepalli Sateesh Kumar	RNI-001-2P	9463

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Raza Microelectronics, Inc
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18920 Forge Drive
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EXAMINER

SHAND, ROBERTA A

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 03/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/023,963	Applicant(s) KUMAR ET AL.	
	Examiner Roberta A. Shand	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-21 and 24-44 is/are rejected.
- 7) ☒ Claim(s) 22 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Finality has been withdrawn, and the following Office Action applies.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 14-21 and 24-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ashikawa (2000-165391) in view of Ohta (U.S. 6122083).

3. Regarding claims 14 and 24, Ashikawa teaches (fig. 1) a network configured to transfer data using time-division multiplexing comprising: a first wireless interface; a physical layer interface; a second wireless interface; a first network node including the first wireless interface and a second wireless interface'. a cross connect switch coupled to the physical layer interface of the first wireless interface and the second wireless interface; a second network node having a third wireless interface coupled to the first wireless interface of the first network node'. and a third network node coupled to the first network node and the second network node (paragraphs 24-35).

4. Ashikawa does not explicitly teach an optical transceiver coupled to the physical layer interface and configured to convert an outgoing data stream from an outgoing electrical signal to an outgoing optical signal and a media abstraction unit coupled to the optical transceiver and

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configured to reframe the outgoing data stream from the outgoing optical signal to a second outgoing electrical signal suited for wireless transmission

5. Ohta teaches (fig. 6) a physical layer interface (15); an optical transceiver (16) coupled to the physical layer interface and configured to convert an outgoing data stream from an outgoing electrical signal to an outgoing optical signal; and a media abstraction (19) unit coupled to the optical transceiver and configured to reframe the outgoing data stream from the outgoing optical signal to a second outgoing electrical signal suited for wireless transmission (col. 12, lines 17- col. 13, line 53). It would have been obvious to one of ordinary skill in the art to adapt this to Ashikawa's system to incorporate optical lines in radio transmission.

6. Regarding claim 15, Ohta teaches (abstract) the first wireless interface is configured to convert an incoming wireless signal to a first incoming electrical signal.

7. Regarding Claim 16, Ohta teaches (col. 12, lines 17- col. 13, line 53) the media abstraction unit comprises a link quality management unit configured to adapt one or more parameters of the first wireless interface to provide more reliable data transmission.

8. Regarding claim 17, Ohta teaches (col. 18, lines 30- 67) the link quality management unit comprises a transmission power control unit.

9. Regarding claim 18, Ohta teaches (col. 18, lines 30- 67) the transmission power control unit is configured to adapt the transmission power of the first wireless interface.

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10. Regarding claim 19, Ohta teaches (col. 12, lines 17- col. 13, line 53 and fig. 6) the link quality management unit comprises a modulation control unit.

11. Regarding claim 20, Ohta teaches (col. 12, lines 17- col. 13, line 53 and fig. 6) the modulation control unit comprises a signal quality detector configured to measure a signal quality of an incoming data stream.

12. Regarding claim 21, Ohta teaches (col. 12, lines 17- col. 13, line 53 and fig. 6) the modulation control unit is configured to adapt a modulation of an outgoing data stream.

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13. Regarding claim 25, Ashikawa teaches (fig. 1) a network configured to transfer data using time division multiplexing comprising: a first wireless interface including a physical layer interface; a second wireless interface: a first network node including the first wireless interface and a second wireless interface; a cross connect switch coupled to the physical layer interface of the first wireless interface and the second wireless interface a second network node coupled to the first network node by a first link having a first a third network node coupled to the second network node by a first wireless link having a bandwidth; second bandwidth; wherein the first bandwidth is not equal to the second bandwidth.

14. Ashikawa does not explicitly teach an optical transceiver coupled to the physical layer interface and configured to convert an outgoing data stream from an outgoing electrical signal to an outgoing optical signal. and a media abstraction unit coupled to the optical transceiver and

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configured to reframe the outgoing data stream from the outgoing optical signal to a second outgoing electrical signal suited for wireless transmission'.

15. Ohta teaches (fig. 6) a physical layer interface (15); an optical transceiver (16) coupled to the physical layer interface and configured to convert an outgoing data stream from an outgoing electrical signal to an outgoing optical signal; and a media abstraction (19) unit coupled to the optical transceiver and configured to reframe the outgoing data stream from the outgoing optical signal to a second outgoing electrical signal suited for wireless transmission (col. 12, lines 17- col. 13, line 53). It would have been obvious to one of ordinary skill in the art to adapt this to Ashikawa's system to incorporate optical lines in radio transmission.

16. Regarding claim 26, Ohta teaches (fig. 6) the first link is an optical link.

17. Regarding claim 27, Ohta teaches (fig. 6) the first wireless link is a free-space optics link.

18. Regarding claim 28, the first wireless link is an RF wireless link.

19. Regarding claim 29, Ashikawa teaches (fig. 1) a fourth network node coupled to the third network node by a second Link.

20. Regarding claim 30, Ohta teaches (fig. 6) the first link is an optical link and the second link is a wireless link.

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21. Regarding claim 31, Ohta teaches (fig. 6) data is transferred over the first link using a first protocol.
22. Regarding claim 32, Ohta teaches (fig. 6) data is transferred over the first wireless link using a second protocol.
23. Regarding claim 33, as for the first wireless link has a first bit error rate and the first link has a second bit error rate, this is inherent in Ashikawa's system because the links are different.
24. Regarding claim 34, Ashikawa teaches (fig. 1) the third network node comprises a fourth wireless interface coupled to the second wireless interface of the first network node.
25. Regarding claim 35, Ashikawa teaches (fig. 1) the third network node is coupled to the second network node using one or more optical fibers.
26. Regarding claim 36, Ashikawa teaches (fig. 1) a fourth network node coupled between the third network node and the first network node.
27. Regarding claim 37, Ashikawa teaches (fig. 1) the first wireless interface is a radio frequency wireless interface.

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28. Regarding claim 38, Ohta teaches (fig. 6) the first wireless interface is a free-space optics wireless interface.

29. Regarding claim 39, Ashikawa teaches (abstract) the network is also configured to transfer data using packets.

30. Regarding claim 40, Ashikawa teaches (fig. 1) the first network node further comprises a TDM user interface coupled to the cross-connect switch and configured for data using time-division multiplexing.

31. Regarding claim 41, Ohta teaches (fig. 6) the cross connect switch comprises: a first TDM framer/deframer coupled to the first wireless interface and configured to deframe a first TDM frame from the first wireless interface; and a second TDM framer/deframer coupled to the a second wireless interface and configured to form a second TDM data frame.

32. Regarding claim 42, Ohta teaches (abstract and fig. 6) the cross connect unit is a Packet/TDM cross connect unit configured to process TDM data and packet data.

33. Regarding claim 43, Ohta teaches (fig. 6) the first network node further comprises a packet user interface coupled to the cross-connect switch and configured for packet-based data.

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34. Regarding claim 44, Ohta teaches (abstract) the Packet/TDM cross connect unit further comprises: a packet switch coupled to the packet user interface; and a TDM cross connect coupled to the TDM user interface.

Allowable Subject Matter

35. Claims 22 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

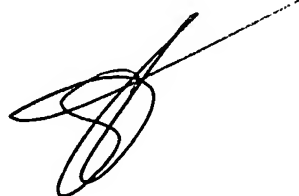
37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Roberta A Shand
Examiner
Art Unit 2665



STEVEN NGUYEN
PRIMARY EXAMINER